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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,341	08/26/2003	Toshiaki Okuno	50212-521	3523
20277	7590	09/08/2004		
MCDERMOTT WILL & EMERY LLP 600 13TH STREET, N.W. WASHINGTON, DC 20005-3096			EXAMINER BOUTSIKARIS, LEONIDAS	
			ART UNIT	PAPER NUMBER
			2872	

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/647,341

Applicant(s)

OKUNO, TOSHIAKI

Examiner

Leo Boutsikaris

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 August 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8/26/03, 1/14/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Objections

Claim 1-20 are objected to because of the following informalities:

Claims 1, 2, 11, 12 include the word "grater", which should be changed to "greater".

Claims 3-10, 13-20 inherit the deficiency of claims 1, 11 from which they depend.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 11 cite that a dispersion compensator is provided between "[t]he signal transmitting end of said optical transmitter and the signal entering end of said optical fiber transmission line, on said optical fiber transmission line, and between the signal emitting end of

Art Unit: 2872

said optical fiber transmission line and the signal receiving end of said optical receiver” in lines 12-17. This amounts to a dispersion compensator being used in both ends of the fiber transmission line. However, this is in contrast to the specification where a dispersion compensator is positioned either on the signal receiving end (left side) of the fiber transmission line (see Figs. 2-3) or on the signal emitting end (right side) of the fiber transmission line (see Figs. 1, 7-8, 11), but on both sides. For examination purposes it will be taken that the dispersion compensator is provided only on one (either) side of the fiber transmission line.

Claims 2-10, 12-20 inherit the deficiency of claims 1, 11 from which they depend.

Allowable Subject Matter

Claims 1, 11 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, and objections set forth in this Office action.

Claims 2-10, 12-20 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claims 1-20 are allowable over the prior art of record for at least the reason that even though the prior art discloses optical fiber transmission systems wherein chromatic dispersion compensators are used to correct for chromatic dispersion of individual channels, the prior art fails to teach or reasonably suggest, regarding claims 1-10, an optical transmission system wherein when a bit rate is B at a specific wavelength in the second wavelength band, a chromatic dispersion value at the specific wavelength is between 0 and $7,500/B^2$ ps/nm, and wherein, in the entire optical transmission system, loss in each signal channel is in the second wavelength band

Art Unit: 2872

is smaller than the highest loss among losses in the signal channels in the first wavelength band, and regarding claims 11-20, an optical transmission system wherein when a bit rate is B at a specific wavelength in the second wavelength band, a chromatic dispersion value at the specific wavelength is between 0 and $7,500/B^2$ ps/nm, and wherein, the lowest received power among the received powers for the signal channels in the second wavelength band is higher than the lowest optical power among the optical powers in the optical fiber transmission line on the signal channels in the first wavelength band, as set forth by the claimed combination.

Taga (US 5,559,910) discloses a dispersion compensation scheme for a WDM system (Fig. 1) where a dispersion compensator 7 is used to compensate for chromatic dispersion of signals all of which have wavelengths below the zero dispersion wavelength of the optical fiber transmission line (Fig. 2). Zhou (US 6,445,850, Fig. 2a) and Bergano (US 6,137,604, Fig. 2) disclose dispersion compensation schemes for WDM systems, where a dispersion compensator is used to compensate for chromatic dispersion of each signal, all of which have wavelengths away from the zero dispersion wavelength of the optical fiber transmission line.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Leo Boutsikaris whose telephone number is 571-272-2308.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

Art Unit: 2872

system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Leo Boutsikaris, Ph.D.
Patent Examiner, AU 2872
September 6, 2004

A handwritten signature in black ink, appearing to be the initials 'LB' or a stylized 'L' and 'B'.